```
Description
Set
       Items
                VIRTUAL (5N) (BUSINESS (5N) MODEL)
S1
         1646
                VIRTUAL NEAR10 ALLIANCE??
S2
            0
     -2-7-50608---
               _ALLIANCE??__
-S-3-
               VIRTUAL (10N) (FLOW?? OR COMMUNICATION)
S4
       15433
     8257324
                CONTRACT?
S5
    10454191
                CONTROL?
S6
          28
                S1 AND S4
s7
           10
                S7 AND S5
S8
           9
                S8 AND S6
S9
S10
            9
                RD (unique items)
S11
          9
                RD (unique items)
          607
                AU=(HALE D? OR HALE, D?)
S12
                S12 AND S1
S13
          0
      723816
S14
                OUTSOURC?
      55320
                INTEGRAT? (5N) OUTSOURC?
S15
S16
          15
                S1 AND S15
           8
                RD (unique items)
S17
S18
                S17 AND S5
            4
S19
            3
                S18 AND S6
S20
            3
                RD (unique items)
S21
            2
                S16 AND S4
S22
           2
               RD (unique items)
S23
     1526264
               COORDINAT?
S24
                S16 AND S23
           2
S25
       94355
               VIRTUAL (10N) (INTEGRATION OR ENTERPRISE OR BUSINESS)
S26
      291375
               FINANCIAL (10N) TRANSACTION?
S27
     1756513
               PAYMENT
S28
       76964
                INVOICE
S29
     2846929
                PAYMENT??
S30
      156521
                INVOICE??
         3459
                S26 AND S29 AND S30
S31
          50
S32
                S25 AND S31
           32
                RD (unique items)
S33
S34
         19
                S33 NOT PY>2000
        20320
                CREDIT (10N) RISK (10N) ANALYSIS
S35
```

S36

0

S34 AND S35

```
6004 11:56 1
```

```
Items
                Description
Set
s1
                VIRTUAL (5N) (BUSINESS (5N) MODEL)
         1646
            0
                VIRTUAL NEAR10 ALLIANCE??
S2
      2750608
s3
                ALLIANCE??
        15433
                VIRTUAL (10N) (FLOW?? OR COMMUNICATION)
S4_
      8257324
                CONTRACT?
S5
S6
     10454191
                CONTROL?
                S1 AND S4
s7
           28
S8
           10
                S7 AND S5
            9
                S8 AND S6
S9
            9
S10
                RD (unique items)
            9
S11
                RD (unique items)
          607
                AU=(HALE D? OR HALE, D?)
S12
S13
                S12 AND S1
            0
S14
       723816
                OUTSOURC?
                INTEGRAT? (5N) OUTSOURC?
S15
        55320
                S1 AND S15
S16
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S17
            8
                RD (unique items)
S18
            4
                S17 AND S5
S19
            3
                S18 AND S6
S20
            3
                RD (unique items)
S21
            2
                S16 AND S4
S22
            2
                RD (unique items)
S23
      1526264
                COORDINAT?
S24
            2
                S16 AND S23
S25
        94355
                VIRTUAL (10N) (INTEGRATION OR ENTERPRISE OR BUSINESS)
S26
       291375
               FINANCIAL (10N) TRANSACTION?
S27
      1756513
                PAYMENT
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                INVOICE
S29
      2846929
                PAYMENT??
S30
      156521
                INVOICE??
         3459
                S26 AND S29 AND S30
S31
S32
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                S25 AND S31
S33
           32
                RD (unique items)
S34
           19
                S33 NOT PY>2000
?save temp
Temp SearchSave "TD087" stored
?s credit (10n) risk (10n) analysis
Processing
Processed 10 of 26 files ...
Completed processing all files
         3988623
                  CREDIT
         4036606 RISK
         6435216 ANALYSIS
     S35
           20320 CREDIT (10N) RISK (10N) ANALYSIS
?s s34 and s35
              19 S34
           20320 S35
               0 S34 AND S35
     S36
```

?

```
Description
Set
       Items
               VIRTUAL (5N) (BUSINESS (5N) MODEL)
S1
         1646
           0
               VIRTUAL NEAR10 ALLIANCE??
S2
      2750608
               ALLIANCE??
S3
               VIRTUAL (10N) (FLOW?? OR COMMUNICATION)
S4
       15433
$5-
    -8257324---CONTRACT?-
    10454191
               CONTROL?
S6
               S1 AND S4
s7
          28
               S7 AND S5
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S8
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               S8 AND S6
S9
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               RD (unique items)
S11
           9
               RD (unique items)
          607
               AU=(HALE D? OR HALE, D?)
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S13
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               S12 AND S1
      723816
S14
               OUTSOURC?
               INTEGRAT? (5N) OUTSOURC?
      55320
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               S1 AND S15
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               RD (unique items)
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S19
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               S18 AND S6
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           3
               RD (unique items)
S21
           2
               S16 AND S4
S22
           2
               RD (unique items)
S23
     1526264
               COORDINAT?
S24
               S16 AND S23
           2
S25
       94355
               VIRTUAL (10N) (INTEGRATION OR ENTERPRISE OR BUSINESS)
               FINANCIAL (10N) TRANSACTION?
S26
      291375
S27
     1756513
               PAYMENT
S28
       76964
               INVOICE
S29
     2846929
               PAYMENT??
S30
     156521
               INVOICE??
               S26 AND S29 AND S30
S31
         3459
          50
S32
               S25 AND S31
           32
S33
               RD (unique items)
S34
           19
               S33 NOT PY>2000
?save temp
Temp SearchSave "TD087" stored
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t s34/6, k/1-19

34/6,K/1 (Item 1 from file: 15)
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02367381 117541709-

\*\*USE FORMAT 9 FOR FULL TEXT\*\*

Identifying effectiveness criteria for Internet payment systems

1998

WORD COUNT: 9810

## Identifying effectiveness criteria for Internet payment systems

...ABSTRACT: method of paying for these products and services. This paper discusses the problem of Internet **payment** systems (IPS) and reports the results of a research project which attempts to identify and...

...TEXT: and security of personal information. A major problem, however, is the lack of an integrated **financial transaction** system suitable for an open electronic marketplace such as the Internet. How the consumer will pay for goods and services and how the provider will receive the **payment** securely over the Internet are issues which are being seen as some of the most...

...factors for Internet commerce.

To overcome these problems, many individuals and organisations have been developing **financial transaction** systems for the Internet which are becoming known as Internet **payment** systems (IPS). Clearly, there is considerable interest in the concept of IPS (more than 30...

- ... although there are also a number of similarities. Most current IPS already guarantee security of **transactions** by applying various technologies to the transmission of the **financial** message (some of them can even protect the customer's privacy. However, are security and...
- ... concludes with a discussion of future research approaches which could further extend this work.

  Internet payment systems

An exact definition of an IPS is difficult to find (and varies widely from ...the purposes of this paper, therefore, we define an IPS as:"

Any conventional or new payment system which enables financial transactions to be made securely from one organisation or individual to another over the Internet."

By its definition, IPS is clearly a sub-type of the wider group known as electronic **payment** systems (EPS). An EPS can be broadly defined as "any transfer of funds initiated through...

- ... The development of EPS has arisen in response to recognition of the weakness of traditional payment systems in the environment of modern commerce (Panurach, 1996). In general, there are two main types of EPS:
- (1) wholesale EPS, designed primarily for the business community's payment needs; and
- (2) retail EPS, designed primarily for the individual consumer of financial services.

Wholesale banking represents **payment** activities occurring at the corporate level (such as automatic salary **payments** to employees' bank accounts, direct company-to-company **payments** via banks, or international funds transfers. Retail banking represents any banking which is not wholesale...

... discuss this range of EPS in detail (but it is important to understand where Internet payment systems fit into the continuum of EPS; and how this sub-group of the wider...

...or government communications channels. It is also important to note that very often, card-based payment systems (such as credit, debit or charge cards), are also defined as retail-based electronic payment systems. These card-based payment systems are mainly used with other types of EPS to maximise the benefits of electronic...

- ... to successful IPS development, since prospective IPS users frequently mention their concern about security of **payments** and financial information, such as card numbers and details. Since the Web was originally designed...
- ... publish information, additional security features are essential for commercial usage (particularly where this involves transmitting payments (Loshin, 1996). Bhimani (1996) also argues that strong security for financial transactions should satisfy additional criteria, including:
- confidentiality;
- authentication;
- data integrity; and
- non-repudiation of the transaction...
- ... can only be protected if banks or merchants are not able to trace back their payments. There are various ways in which the privacy of Internet users can be protected but there is a conflict between consumers' right to privacy and regulators' desire to prevent illegal financial transactions. While consumers want to retain their privacy, some government bodies and organisations want to be...
- $\dots$  maintained unless the customer gives permission, or a government warrant is issued.

Types of Internet payment systems

An important issue for any researcher into IPS is: "why has the development of...

- ...recent years on the Internet; and why do so many organisations bother to develop new payment systems?" Fundamentally, the major reason for developing an IPS is that it provides organisations and...
- ... market" or "on-line shopping" (Crede, 1996). In other words, the provision of Internet-based **payments** is the last major barrier to the Web's ability to provide a true market...
- ... 1996) argue that electronic markets will benefit both companies and consumers:
- Companies will benefit from **virtual** markets because the concept of online shopping can make their **business** communication easier and cheaper.
- Consumers will benefit because on-line shopping is convenient and saves ...category of its own in the interests of clarity).

  The principle of electronic cheque based payment systems is similar to that of the traditional paper cheque, the only difference being that...
- ...kept securely in the bank (Richards, 1996).

First Virtual Holding is a company providing secure **payment** systems over the Internet by means of a third-party electronic clearing house system. The...

... different approach again is provided by CyberCash, which enables Internet commerce by providing a secure payment system over the Internet. The CyberCash secure Internet payment service guarantees the security of any financial transaction through secure communications between consumers, merchants and banks (CyberCash, 1996). Three separate programs are used to ensure security of the payments:

- (1) consumer software;
- (2) merchant software; and
- (3) operating software which is part of the...
   ...called the CyberCash Wallet and is the key component of the system:
- to make a payment using CyberCash, consumers must link their credit card details to wallet ID;
- once this link...
- ...CyberCash;
- CyberCash reformats this message and sends it to the bank for approval;
- when the **payment** is approved by the bank, CyberCash notifies the merchant;
- finally, the merchant will send an...
- ... 56-bit DES encryption and digital signature features are used to secure messages during the **payment** approval process (CyberCash, 1996) which, according to Loshin (1996), takes only around 15 seconds to...
- ...browsers and most server platforms. Crede (1996) believes that CyberCash is a more cost-effective **payment** system than credit card based systems. Card based systems

We have used this term to...

- ... for a transaction, although some proposals require special reading devices in order to transmit the **payment** directly over the Internet. The great advantage of this approach is that it allows consumers...
- ...problem, MasterCard and Visa co-operated to develop a technical standard for safeguarding credit card payments in February 1996 (MasterCard, 1995; Visa International, 1996). This new specification is called secure electronic transactions (SET) and ensures the security and privacy of personal and financial information by adopting digital signatures and public-key encryption technology. SET also uses digital certificate...the existing network of ATMs so that cash can still remain the predominant form of payment transaction (Crede, 1996). To be able to make payments directly over the Internet you need special software and a smart card-reading device. Values...
- ... smart card-based systems with electronic cash based systems to increase security and portability for **payments** over the Internet. The Mondex card is an electronic cash smart card. As Panurach (1996...
- ... an electronic token equivalent to cash. According to DigiCash (1994), Ecash is designed for secure **payments** from any personal computer to any other workstation, over e-mail or the Internet. An...

- ... Ecash is anonymous, hard to forge and prevents criminal usage. DigiCash ensures the security of **financial transactions** and the privacy of customers by applying public key encryption, digital signature techniques and blind...
- ... and their vendors use EDI to exchange many business-related documents such as purchase orders, invoices, shipping notices, and payments to cut costs and run the business more efficiently. Financial EDI involves the electronic exchange of financial documents such as payments and remittance advices in a standard format which computers can read (Bank of America, 1996...

... Security, Inc.

Micropayment-based systems

Micropayments are small-value transactions and comprise the majority of payments on the Internet at present (Glassman et al., 1995), since many information goods (such as and Micro Payment Transfer Protocol (MPTP).

As an example of how these protocols work, Millicent is a secure...

- ...of the Internet since its commercialisation has provided the impetus for the many new Internet payment systems currently available or under development, because it became apparent very quickly that traditional payment methods would not suffice for this new electronic marketplace. In the early stage of IPS...
- ... At this stage, it is difficult to evaluate how reliable these IPS are because a **payment** system requires more than security alone to be really effective. The remainder of this paper...
- ... research project which this paper describes was intended to identify common effectiveness criteria for Internet payment systems. But before these criteria could be identified, it was necessary to define two subsidiary objectives:
- (1) Who are the main parties involved with Internet payment systems?
   (2) What are the effectiveness indicators, according to each party involved in an Internet payment system?

After careful examination of several research methodologies, including in-depth case study and survey...questions:

- (1) In your opinion, what are the major parties directly involved with an Internet payment system? Please identify and discuss each of the parties in moderate detail.
- (2) When you...
- ... a key player, although some IPS provide services without the direct involvement of financial institutions. **Payments** must be cleared by financial institutions regardless of how much they are involved in the...
- ... monopoly on consumers' confidence regarding their money. To maintain their position as a centre for **payments**, financial institutions are taking advantage of the opportunity to develop collaboration between IPS developers and...
- ... SET from MasterCard and Visa International), the IPS providers are generally third parties which establish **transactions** between **financial** institutions (banks and NBFIs) and end-users (merchants and consumers). At this stage, IPS providers...

- ... conventional and information-based) directly to consumers over the Internet, using an IPS to manage payments. Merchants' main requirement is for a reliable and low-cost IPS, since Internet vendors are...
- ... provide secure transactions over the Internet, a large proportion of consumers still believe that making payments over the Internet is a dangerous activity. Apart from ensuring the security of their payments, consumers are also looking for IPS that are reliable, cheap and widely accepted by a...
- ... including the impact of the IPS concept on the money supply, ways of tracking tax payments in cyberspace and the need to protect consumer rights and the public interest. At this...
- ... protect the public interest. For instance, law enforcement wants to be able to trace back payment transactions to track illegal activities, but this requires consumers to sacrifice some of their entitlement to privacy.

  Network providers. These parties provide the physical support infrastructure for Internet payment systems, including IPS software, hardware and telecommunications facilities.

Effectiveness indicators for IPS

Restating question 2...of the first round include:

- Ability to allow refunds: merchants should be able to refund payments to clients if necessary.
- Ability to support both on-line and off-line activity: allows...
- ...and throughout the day.
- Duration of transaction process: the time it takes to approve the payment (transaction delay must be minimised as far as possible.
- Ease of use (convenience): the IPS...
- ... of systems to gain competitive advantage over competitors.
- Irrefutability: the ability to ensure that the **payments** cannot be refuted or disproved.
- Legal certainty: payments made using an IPS must be legally accepted.
- Low fixed costs: costs (including set-up...
- ...just like a cash transaction).
- Portability (remote access): the ability to allow consumers to make payments from a variety of locations using a range of different interface devices.
- Privacy: the ability...
- ... Anonymity and privacy are frequently treated as being identical. There is no doubt that anonymous **payment** can provide a perfect solution for consumer privacy, but this is the area in which...
- ...being used and the level of government control. If consumers are looking for relatively small payments (say less than \$1 in value), the speed of the transaction might be more important than the level of security. Conversely, if the payment is large (say more than \$100 in value) security will probably be more important than...l) Consider small and medium-sized enterprises (SME) rather than large enterprises.

- (2) Consider direct **payments** from consumers to providers of goods and services.

Table II summarises the results of the...

- ...rankings are likely to change, just as they do in the case of any other payment system:
- The results clearly indicate that security and reliability (trustworthiness) are major effectiveness indicators for almost all groups.
- Financial institutions need to be able to authenticate individual transactions in terms of payer and payee, to avoid putting themselves at risk. They would also...
- ...costs discourage consumers from using the system.
- Consumers are more concerned with security of their **payment** details and low transaction costs. To make an IPS attractive to consumers, it must not be more expensive than traditional **payment** systems (unless the system is so convenient that consumers are willing to offset the higher...
- ... has become a most popular market medium for Internet commerce. By extending variations on traditional **payment** systems into this new electronic marketplace, consumers and organisations have begun to develop a number of new **payment** systems specifically oriented towards Internet commerce. In the early stage of IPS development, security was...
- ... research project which attempts to identify effectiveness factors for the various parties involved in Internet **payments** systems, using a Delphi survey to gain the views of recognised experts in the field...
- ... a number of factors, such as what consumers are looking for and what kinds of **payments** are being made. However, for the purposes of this study, general effectiveness indicators were identified...
- ... the scope of this paper. These issues relate not only to technical aspects of Internet payment systems, but also to their political aspects (and include the following concerns:

   It is very...
- ... How can a company impose a legal obligation on a customer using electronic ordering and payment?
- To what extent should anonymous payments be allowed for the consumer? Government agencies are responsible for managing the movement of money payments raise another important issue, that of criminal money laundering. Hettinga (1996) stated that money laundering...
- ... the corruption of entire societies. One clear argument made by Richards (1995) is that anonymous payments should only be allowed for small transactions, rather than large ones, to gain wide acceptance...
- ... This paper has attempted to identify those factors which most encourage effective and efficient Internet payment systems. While this research project was only a "pilot" for the development of such indicators...
- ... Crede, A. (1996 "Electronic commerce and the banking industry: the required and opportunities for new payment systems using the Internet", The Journal of Computer-Mediated Communication, Vol. 1 No. 3. 5...
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- ... Computing (Information Systems) Honours degree. My research involves an analysis of efficiency criteria for Internet **payment** systems (IPS) where IPS is defined as:"
- any conventional or new **payment** system which enables **financial transactions** to be made securely from one organisation or individual to another over the Internet."
- I...
  ...contains the first-round questionnaire. For the purposes of this study I
  define term "Internet payment systems (IPS)" as "Any conventional or new
  payment system which enables financial transactions to be made
  securely from one organisation or individual to another over the Internet".
  Some...
- ...Millicent, etc.
- Q1 In your opinion, what are the major parties directly involved with Internet payment systems? Please identify and discuss each of the parties in moderate detail (a maximum of...
- ... effectiveness, fungibility, universality, security, privacy, anonymity, reliability (trustworthy), low fixed cost, acceptability, portability, scalability, low transaction cost, transferability, obtrusiveness, duration of transaction process.
- Sample answer. Financial institutions: flexibility (ability to allow different kinds of payment mechanisms); scalability (ability to decentralise systems as much as possible to avoid bottlenecks); IPS providers...
- ... hardware, software, opening account and annual account cost); flexibility (ability to allow different kinds of payment mechanisms.Consumers: fixed cost (costs of hardware, software, opening account and annual account cost); anonymity...

...and medium sized enterprises (SME) rather than large enterprises.

Caption: Figure 1; Types of electronic **payment** systems; Table I; Effectiveness indicators for Internet **payment** systems; Table II; IPS effectiveness indicator ranking

...DESCRIPTORS: Payment systems

34/6,K/2 (Item 2 from file: 15)
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\*\*USE FORMAT 9 FOR FULL TEXT\*\*

Interoperation support for electronic business

Jun 2000 LENGTH: 9 Pages

WORD COUNT: 5309

...TEXT: pertains to such matters as requests for quote, bids, purchase orders, order confirmations, shipping documents, **invoices** and **payment** information. In this way multiple enterprises within a shared market segment collaboratively plan, implement, and...

- ... although ordering and distribution of goods can be fast, the supporting accounting and inventory information, payment, and actual funds transfer-which require communication of business processes with business application systems-tends...
- ... which typically relies on database support, is an accounts receivable system that keeps track of **invoices** sent and **payments** received. This time-lag and the decoupling of accounting and **payment** information systems from the ordering and delivery of goods and service (business) processes, increases the...
- ... consuming reconciliations. Ideally, an e-commerce application should eliminate the gaps between ordering, distribution, and payment, enabling the development of interoperable links to record-keeping and accounting information systems.

### Figure 1...

- ... Inter-trading is effected through the exchange of messages containing standard business objects, such as **invoices**, purchase orders, or electronic funds. EDI is prevalent in industries such as goods transportation, food...
- ...value chain. This avoids creating islands of automation in the operation of an end-toend business process by encouraging networks of highly efficient virtual organizations that will challenge the conventional business paradigm.

Interoperability in the context of e-commerce and integrated value chains is driven by... transaction service layer. This layer provides flexible transaction support for such services as funds transfer, payment, billing and accounting services, invoicing, remittance, debit/credit and models contingency, exception, and remedial facilities... interoperability challenge places particular emphasis on integration at the transaction level and not on data integration, replication, and batch transfers of data. In addition, the virtual nature of the e-commerce end-to-end business processes requires business rules and transactions be available to partners for incorporating within their own...long-lived propositions involving negotiations, commitments, contracts, floating exchange rates, shipping and logistics, tracking, varied payment instruments, exception handling, and customer satisfaction. Business transactions are used to

interchange everything from product...

... by unconventional types of atomicity. We may distinguish between four broad types of atomicity [11]:

Payment atomicity. Payment -atomic - protocols - effect the transfer of funds from one party to another. Payment atomicity is the basic level of atomicity that each electronic commerce protocol should satisfy

Goods atomicity. Goods atomicity protocols are payment -atomic, and also allow an exact transfer of goods for money.

Delivery atomicity. Delivery-atomic protocols are **payment** — and goods-atomic protocols that allow both transacting parties to prove exactly which goods were...

... protocols that include the exchange of financial information services and the exchange of bills and **invoices**. Thus **payment** -atomic protocols must also be contract-- atomic.

In the world of e-commerce, traditional database...

... Generic characteristics:

Who is involved in the transaction;

What is being transacted;

The destination of payment and delivery;

The transaction time frame; and

Permissible operations.

- 2. Special purpose characteristics:
  \*Links to...
- ...be able to express varying types and extents of business commitments.

Network Security Services

Protecting **financial** data in transit, communications, and securing the entire e-commerce **transaction** process are critical concerns. A number of improvements have been made in network protection technology...to address these concerns is the development of a secure electronic transaction specification for credit/ **payment** card transactions over the Web.

The Secure Electronic Transaction (SET) protocol (www.setco.org) was developed jointly by payment card companies, specifically Visa and MasterCard, and software manufacturers. SET offers advancements in Internet specifications...

- ... and uses aspects of a public key infrastructure. The SET specification is designed to enable **payment** security for all involved, authenticate cardholders and merchants, provide confidentiality of **payment** data, and define protocols for potential electronic security service providers. Currently, IBM and VeriFone are...
- ... transaction costs. The NetBill e-commerce system (www.ini.cmu.edu/netbill) is an electronic payment negotiation framework that was developed to support economical, secure sales of low-cost goods. The...
- ... a message. These tasks fall well within the premises of contract formation and enforcement.

# Secure Payment Mechanisms

Currently, numerous merchants are successfully conducting business on the Internet using HTML/XMLbased forms...

- ... situation by assisting consumers—in—conducting\_online\_transactions by allowing them to store billing, shipping, payment, and preference information and to use this information to automatically complete merchant interactions. Electronic wallets...
- ... to fill in their Web forms. ECML can be used in conjunction with any secure payment mechanism, for example, SET transactions, to allow a merchant to publish consistent and simple Web...documents being exchanged during e-commerce and for describing metadata structures of electronic wallets and payment schemes.

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34/6,K/3 (Item 3 from file: 15)
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\*\*USE FORMAT 9 FOR FULL TEXT\*\*

E-trading easier and cheaper for corporates

Feb 2000

WORD COUNT: 2683

...ABSTRACT: are promising to save corporates costs and execution time on FX, commercial paper and other **financial transactions**. A range of new developments online is discussed, including business-to-business trading. There are...

...TEXT: are promising to save corporates costs and execution time on FX, commercial paper and other **financial transactions**. Jack Large reviews a range of new developments online, including business-to-business trading.

With...For most business-to-consumer transactions on the Internet where the amount is relatively low, payment is by credit card. The supplier has the transaction approved by the card issuer and the payment is guaranteed. But it is not so easy in high-- value business-to-consumer transactions and business-to-business transactions, with payments ranging from thousands to many millions of dollars. Quite complex credit and financing decisions may...

... level. It brings together all the participants in the credit and financing process in a **virtual** network that facilitates e- **business** on a global basis."

The corporate user of Global Financing Network instals eCredit.com application... only a browser and Internet access for businesses large and small to transact their business. **Payments** can be made only through Bank of Montreal in Canada and Harris Bank in Chicago...

... TotalTrade do not need to be a customer of either bank to participate in the payment facilities.

An example of a process that can be enabled by TotalTrade is the whole...

... company and its smaller trading partner conduct the entire trading process from purchase order to payment through a single access point.

In the above example TotalTrade enables both payable and receivable...

- ... firm's internal file format, enabling direct loading into its system without re-keying.
- \* An **invoice** is sent by the supplier to TotalTrade, where it is converted into-another-easy-to-use e-form for the customer.
- \* The invoice is approved by the customer, and this launches the creation of an electronic payment.
- \* Money is directly deposited into the supplier's bank account with the remittance information returned...

34/6,K/4 (Item 4 from file: 15)

Dean'

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01968923 47606058

\*\*USE FORMAT 9 FOR FULL TEXT\*\*

E-commerce: Dispelling the myths and exploiting the opportunities

Dec 1999 LENGTH: 5 Pages

WORD COUNT: 4295

...TEXT: yet to make a profit despite phenomenal turnover.

However, to use this as the typical **business** example is misleading. Non-virtual companies, such as Dell, have successfully combined e-commerce opportunities with their existing business, increasing...

- ... 1 information sharing; informing and interacting internally and with third parties;
- 2 transacting; purchasing and payment transactions with third parties;
- 3 the service and support proposition; integrating customers and suppliers into...come from the US market.
- \* Shopping malls

Some ventures have unsuccessfully tried to transfer existing business models to the web, for example, by setting up a **virtual** shopping mall. The main reason for their limited success is that the web allows users...

... would direct the customer to the Walt Disney site, rather than to a general retailer.

### \* Payment

The lack of public confidence in electronic **payment** systems is considered as one of the main factors constraining business to consumer e-commerce...

- ...shortening the production cycle.
- \* Customer ordering

An extranet can allow customers to place orders, receive invoices, track shipments and process payments. Boeing, in the USA, launched its on-line spare parts extranet in October 1996; 2...

... low cost per transaction when compared to other channels, and the reduction in paper based  ${\it transactions}$  . \* Low cost channel

The average cost per transaction, for a financial services provider, is greatly reduced when using internet technologies.



\* Paperless sourcing from suppliers

The switch... the security threats that companies face and the solutions which may overcome these threats:

### \* Secure payment methods

The issue of transacting business over the internet is contentious. The main reason for...

...slow development of technology to conduct secure e-commerce transactions has been the lack of **payment** systems. However, recent advances in security techniques have made internet **payment** transactions safer than other methods such as telephone credit card **payments** or paper-based cheque signatures. Developments include the Secure Electronic Transfer (SET) standards now in...

... of investment

The initial costs for the company includes design of the web site and payment to the internet Service Provider (ISP). Costs can vary greatly depending on both the level...

34/6,K/5 (Item 5 from file: 15)
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01706953 03-57943

\*\*USE FORMAT 9 FOR FULL TEXT\*\*

E-commerce takes off
Oct 1998 LENGTH: 3 Pages
WORD COUNT: 2084

WORD COUNT: 2004

...TEXT: sales online with consumers or businesses.

Large companies have been building private networks called VANs (-virtual private networks) for more than two decades to link with business partners such as suppliers and contractors. But small companies couldn't justify doing business electronically...

...using IBM's Net.Commerce e-commerce technology. Net.Commerce will enable EarthSavers to process **financial transactions** between contractors and suppliers. An IBM database program will maintain pertinent information on contractors, customers make **financial transactions** and exchange documents such as purchase orders, product specifications, and **invoices** -all electronically.

In the past two years, however, large companies have begun to move some... ... to access secure (Web sites, where they can bid on contracts, receive orders, and send invoices .

Among the small companies that have discovered that their largest trading partners expect them to...

... the TradeWeb Web site and enters them into its accounting system. It then generates an **invoice** using a template developed by Chrysler. Once a month, A&M sends its **invoices** to Chrysler over the Web. A&M pays \$50 a month to subscribe to TradeWeb...

 $\dots$  and manager of the EDI system. Previously, A&M received orders from Chrysler and sent **invoices** through the mail. Trimboli says it took up to three months for the company to receive **payments**.

(Illustration Omitted)

Captioned as: Commercial Sales Via The Internet

By trading over the Web, A...

...says. "The turnaround time is much faster, and if there are any problems with an invoice , they contact us right away through e-mail, and I can immediately turn around and...

... s requests for quotes and places bids electronically. In addition, Lancaster receives orders and sends invoices via the Web. Harbinger charges Lancaster a monthly subscription fee and \$1.50 for each...

...and Lancaster are three time zones apart, so when the two companies were using paper invoices , Raytheon had to wait until Lancaster opened for business before it could fax purchase orders...

(Item 6 from file: 15) 34/6,K/6

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01579791 02-30780

\*\*USE FORMAT 9 FOR FULL TEXT\*\*

Attention virtual shoppers: VARs are becoming increasingly equipped to deploy Web-based business sites

Fall 1997 LENGTH: 4 Pages

WORD COUNT: 1763

virtual shoppers: VARs are becoming increasingly equipped to Attention deploy Web-based business sites

...TEXT: umbrella term for an entire spectrum of activities such as electronic data interchange (EDI), electronic payment systems and order management. It also includes business application linking solutions in both business-to...

... provides a set of computerized forms that automate common business transactions such as purchase orders, invoices, shipping notices and requests for proposals. Traditional EDI, which is based on private value-added...to the Internet Engineering Steering Group (IESG) for review.

Visa, MasterCard, American Express and leading financial institutions have endorsed both TSL and Secure Electronic Transaction (SET) as Internet standards. The SET standard is a method to secure bankcard transactions on...

(Item 7 from file: 15)

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01421964 00-72951

\*\*USE FORMAT 9 FOR FULL TEXT\*\*

Logistics and information technology: A coordination perspective

1997 LENGTH: 17 Pages

WORD COUNT: 5555

...TEXT: in order to create better information, which in turn should support lower inventories and improved financial performance. But the evolution of IT and diminishing transaction costs will also lead to a fundamental restructuring of industry practices for distributing and supporting...

... and the flow of information related to those goods, such as purchase orders, waybills, and payments . The nodes or decision-making points linking the points represent the different participants, such as...sample. A bank affiliated with the on-line network extends credit if needed and electronically invoices the engineer's department. In turn, an EDI system pays the bill electronically. An express...

... or actual orders. Second, there is the order cycle itself, followed by distribution, receipt and payment. Third, supplier performance is evaluated and feedback provided. As—will—be—discussed below, the objectives ... of conventional information gathering techniques through centralization has occurred; however, the paper-based system of payment has only begun to be converted to an electronic one.

As mentioned previously, Wal-Mart...

... of costs between the various logistics activities such as order processing, warehousing, shipping, delivery, and payment .38 Each substructure has a different set of constraints and should be optimized independently.

The... 12 (December 1994): 41-50. 14 Jeffrey F Rayport and John J. Sviokla, "Exploiting the **Virtual** Value Chain," Harvard **Business** Review 73, no. 6 (November-December 1995): 75-85. '5Same reference as Note 14.

o. 6

Footnote...

34/6,K/8 (Item 8 from file: 15)

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01300010 99-49406

\*\*USE FORMAT 9 FOR FULL TEXT\*\*

New trends in buying and paying

Sep 1996 LENGTH: 1 Pages

WORD COUNT: 905

...TEXT: agreements, association rules, and standards. It is used routinely to transact inventory order-related information.

**Financial** EDI and Electronic Funds Transfer (EFT) as part of **transaction** settlement are increasing in popularity. A customer will send an electronic remittance advice to its...

...advice to the supplier's financial institution. The supplier's financial institution will credit the **payment** to the supplier's account and forward the remittance advice to the supplier.

Significant time...

... transaction activity, reduced number of suppliers, reduced price for goods acquired through integrated suppliers, reduced payment activities, reduced labor time to acquire needed goods, and increased consistency in the quality of...

...employees.

Interet mails. The Internet is only beginning to gain acceptance as a vehicle for **business** -to- **business** transactions. **Virtual** malls, such as IndustryNet and MROP On-Line, bring manufacturers, distributors, and customers together in...

... daily company orders are compiled and transmitted via EDI to the supplier. The supplier can **invoice** purchases electronically, enabling the customer to match the order and **invoice** electronically for **payment** approval. For MRO buys, it is not cost-efficient to await matching of these documents...

...regard to receipt of MRO goods can be dealt with offline.

Direct debits. Some MRO **invoices** can be paid automatically by Automated Clearing House (ACH) transfers from the customer to the supplier's bank account. At present, "direct debit" programs are associated with insurance

and utility payments.

Controllers are hesitant to use any payment mechanism that will transfer cash directly out of the company account when the amount to...

... number of leases with a major manufacturer of copier equipment. The company was receiving an invoice for every machine under lease. With a phone call, ITT Automotive was able to get the copier company to consolidate its billing into one monthly invoice . Although summary billing is effective in reducing paperwork, it probably won't be a comprehensive...

... outsourced. It is common, for example, for companies to let third-party operations handle freight payment processing. Some major commercial banks even provide the services necessary to handle all invoice activities.

34/6,K/9 (Item 9 from file: 15)
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01246602 98-95997

\*\*USE FORMAT 9 FOR FULL TEXT\*\*

Key elements of an effective international treasury system

May/Jun 1996 LENGTH: 4 Pages

WORD COUNT: 2101

...TEXT: between entities. Some of this movement is scheduled in the form of corporate loans carrying payment terms, including interest, but much is tied to the cash flow of an organization and...

- ... the objective for any truly effective international system must be to consolidate all of the financial information transactions and flows within All divisions, whether domestic, anywhere the enterprise. international or departmental, all operating...trends in corporate finance. These include, but are not limited to:
- 1. Government mandates that payments be electronic and that invoices be submitted electronically from vendors.
- 2. Transactions will be tracked more at the point of origination, with decision support coming from the use of a virtual database that can link all aspects of the enterprise .
- 3. The evolution of electronic cash movement to the elimination of checks and other forms of paper payment (and receipt), which are cumbersome, time consuming and expensive, especially with regard to reconciliation and

34/6,K/10 (Item 10 from file: 15)

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01175110 98-24505

\*\*USE FORMAT 9 FOR FULL TEXT\*\*

Integrated redesign solutions with electronic commerce

Jan/Feb 1996 LENGTH: 6 Pages

WORD COUNT: 2304

Financial organizations, like Insignia, are constantly challenged TEXT:

to apply innovative **transaction** processing solutions to enhance performance. Demand for quality from internal and external customers and suppliers...

... application that would overcome such objections and allow owners, or their designate, to initiate debit transactions—by telephone.

#### Financial EDI

Insignia's use of electronic funds transfer (EFT) is not new on the cash...

- ...use of the automated clearing house (ACH) to transfer deposits, Insignia has been receiving subsidy **payment** from the Housing & Urban Development (HUD) agency for several years via the ACH in the...
- ... use of EDI to integrate the reporting and posting of the detail related to these **payments** directly to the accounts receivable system. This information is reported directly to Insignia by the banks. This application has reduced the processing cost per **payment** by more than 80 percent and the cycle time by over 50 percent. The result...
- ...a dramatic improvement in the company's ability to manage the initiation of time-critical payments such as utility billings, and mortgages.

Bar Coding

The use of bar coding was implemented...

... position by applying certain predefined "rules" to monitor available cash, required reserve balances, match predefined **invoice** priorities, and schedule disbursements appropriately. The system schedules **invoices** for **payment** based on a combination of the highest priority assignment, the oldest **invoice** date, and the oldest due date.

These decision-making "rules" represent a significant. automation of the payment -initiation workflow process.

FFT

- A major use of EFT, namely the ACH, involves the movement of funds from field deposit accounts to appropriate disbursement accounts in order to fund **payments**. As receipts are reported, they are automatically transferred into the banking system and the CMS...
- ... process. In early 1995, Insignia began taking advantage of CD-ROM technology to receive check payment detail. This simplified the company's research effort and information storage requirements. In late 1995...
- ... implemented in 1994, in an attempt to reduce escalating paper handling costs associated with processing invoices. This application focused on imaging's "Document Capture" element. Invoices received in the mail room are scanned and become resident on the imaging server. Accounts payable staff then have access to the imaging system to review invoices and process them for payment into the payables system. The original implementation plan anticipated annual savings in excess of 15...
- ... of FEDI became a necessity in 1995 as Insignia continued to grow. The volume of **invoices** escalated as did processing costs. Insignia viewed the implementation of FEDI from a strategic perspective...
- ...water, gas, and telecommunications were creating a paper quagmire.

The strategy was to accept electronic invoices, and originate electronic payments to partners. Criteria for assessing service providers included the following:

Banks

- \* FEDI expertise
- \* Comprehensive solutions...
- ...at reduced cost
- \* Enhanced bank reconciliation process
- \* Improved supplier relations

The importance of timely mortgage payments resulted in their early identification as an EFT application. In at least one case, the receiver was interested in receiving a paper document detailing the nature of the payments However, Insignia's strategy was to avoid paper. As a solution, Insignia was able to have its banks take the related information from the originating ANSI 820 Payment Order Remittance Advice transmission and automatically generate the required fax. This solution met the partner...

...s national supplier purchases and reduce the time it takes a supplier to receive a payment by more than 90 percent.

Insignia's fiduciary responsibility to owners required its criteria for...

- ... of evolving electronic catalog technologies, develop a comprehensive solution covering purchasing, inventory control, and the **payment** process. When fully implemented, benefits will include:
- \* Reduced processing costs
- \* Improved control
- \* Enhanced supplier relationships...
- ... to the network. This has improved productivity, and helped to control travel costs, as these "virtual" associates support the business. Insignia has expanded its use of E-mail externally to include selected employee access to...forms were implemented in 1995 for applications such as funds transfer initiations, journal entries, and invoice review. In addition, on-line approval of such transactions was implemented. The benefits of these...
- ... processing. In areas such as accounts payable, it also results in fewer supplier inquiries, as **payments** are processed faster, more accurately, and with fewer manual hand-offs.

Security

As with any...

34/6,K/11 (Item 11 from file: 15)
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00759577 94-08969

\*\*USE FORMAT 9 FOR FULL TEXT\*\*

A storage subsystem for image and records management 1993 LENGTH: 29 Pages

WORD COUNT: 13512

...TEXT: even more rapid.

Large and small objects. Object sizes range from about 1000 bytes for financial transaction records to 10 million bytes for technical

pictures. When digital video and audio libraries become...running Operating System/2\* (OS/2\*); library catalog servers execute either in mainframes running Multiple Virtual Storage/ Enterprise Systems Architecture (MVS/ESA\*) or Multiple Virtual Storage/Extended Architecture (MVS/XA\*) with Customer Information Control System (CICS\*) and DATABASE 2\* (DB2... library catalog. For instance, a highway department might have an independent database relating maintenance contractor invoices to bridge numbers; a query join would permit a search for "inspection reports of their bridges... data administrators, to proper activities, and differentiation of user roles from individuals (e.g., " payments office manager" instead of "Jane Doe") \* Proxy support, in which a human user acting for...

34/6,K/12 (Item 1 from file: 16) DIALOG(R) File 16:(c) 2004 The Gale Group. All rts. reserv.

Supplier Number: 60578516 (USE FORMAT 7 FOR FULLTEXT) PRODUCT SUPPORT/ADMINISTRATION. (Buyers Guide)

Jan, 2000

Word Count: 27831

. . .

Instruments, WANs, DOS, Lantastic (Artisoft), Netware (Novell), Windows NT, Windows 95, Windows 98 Secure payment processing with MICR check printing software. Includes electronic payments, positive pay, bank reconciliation and 1099 processing modules.

SunGard Insurance Systems 500 Northridge Rd., Ste...

...centralized check writing and EFT issuing system for all disbursements across the enterprise, including claim payments, agent commissions, invoice payments, and on-demand checks. Functionality includes repetitive payments, accounts payable, check writing 1099 tracking and more.

Accounting - GAAP

NaviSys

1600 S. Brentwood Blvd...channels. Client-orientation supports multiple contracts and hierarchies, complete compensation support, consolidates commission statements, flexible payment schedules, multiple company support, on-line commission statement and history and year 2000 compliant.

Multiactive...including support for an unlimited number of equity and fixed funds, allocates incoming and outgoing payments and handles requested and automatic transfers including dollar cost averaging, portfolio balancing, and earnings sweep...

...navisys.com

LifeCAD Payouts IBM PCs, Intel, LANs, Windows NT, Oracle LifeCAD Payouts supports repetitive payment products in a distributed computing client/server environment. Includes a built-in import function to... including support

for an unlimited number of equity and fixed funds, allocates incoming and outgoing payments and handles requested and automatic transfers including dollar cost averaging, portfolio balancing, and earnings sweep...

...including support

for an unlimited number of equity and fixed funds, allocates incoming and outgoing payments and handles requested and automatic transfers including dollar cost averaging, portfolio balancing, and earnings sweep...including support for an unlimited number of equity and fixed funds, allocates incoming and outgoing payments and handles requested and automatic transfers including dollar cost averaging, portfolio balancing, and earnings sweep...com

LifeCAD Payouts
IBM PCs, Intel, LA, Ns, Windows NT, Oracle
LifeCAD Payouts supports repetitive payment
products in a distributed computing client/server
environment. Includes a built-in import function to...
5700, 888/231-8258

Fax: 512/338-7041

Web Address: http://www.csc.com

Repetitive **Payment** System (RPS)
The most widely used benefit **payment** administration system. Online, real-time, advanced capabilities to handle annuity and bank products as they...

...760-1400

Fax: 404/760-1419

Web Address: http://www.derivion.com

Electronic Bill Presentment & Payment - inetBiller((SM))
Derivion's suite of turnkey Internet billing services,
inetBiller((SM)), offers very rapid...

...setting up the interfaces to an existing billing system, presenting the bills, enabling on-line payment options, promoting the service, and launching the process of enrolling customers.

Fiserv SIS 750 Hammond...com

FREEDOM Billing Series
IBM Mainframes, IBM MVSIMVSIVSE
Automated for direct, account and list billing. Payment
methods include on-line entry, EFT, payroll deduction,
Lockbox, OCR and credit card. Billing frequency...

...Novell), OS/2,

Windows NT/95

TravisGroup Billing produces all types of group benefit premium invoices, including list billing. Designed for use by administrators offering "one check" services to employers and...100,000 items and non-database items into a claim file for final settlement and payment.

Fiserv SIS
750 Hammond Dr., Bldg. 19, Ste. 200,
Atlanta, GA 30328-5501
Contact: Louise...

# ...Windows 98

Handles liability, auto and property. Includes: Loss reporting, loss, expense and medical reserving, payments, reserve, e-mail and payment history, diary with history, recovery litigation, ad-hoc reporting, mail merge, import/export-capabilities-and....to-use\_with\_full\_enrollment, billing, agent commissions, claims tax and miscellaneous deductions, and repetitive payment features.

Life Insurance Data Processing 3590 Hobson Rd., Woodridge, IL 60517 Contact: Bill Bussell 630...today which provides real-time access to millions of current conventional and government mortgage loan transactions nationwide.

McCracken Financial Software 8 Suburban Park Dr., Billerica, MA 01820 Contact: Kim Cooper 978/439-9000, 800...0892 Email: ymcdonald@prccorp.com Web Address: http://www.webmaster@prccorp.com

GEN-A-RATE, Virtual Policy
GEN-A-RATE software offers unparalleled business
functionality for rating and policy issuance for all major
lines of business in all 50...0892
Email: ymcdonald@prccorp.com
Web Address:
http://www.webmaster@prccorp.com

GEN-A-RATE, Virtual Policy
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functionality for rating and policy issuance for all major
lines of business in all 50...0892
Email: ymcdonald@prccorp.com
Web Address:
http://www.webmaster@prccorp.com

GEN-A-RATE, **Virtual** Policy GEN-A-RATE software offers unparalleled **business** functionality for rating and policy issuance for all major lines of business in al) 50...

### ...and others

using a secure Internet plat-form. Service includes first reports, bills, messages and payment outsourcing.

USA Systems Group P.O. Box 2740, Sarasota, FL 34230 Contact: Sharon Statdfield 941...

34/6,K/13 (Item 2 from file: 16)
DIALOG(R)File 16:(c) 2004 The Gale Group. All rts. reserv.

05096100 Supplier Number: 47482118 (USE FORMAT 7 FOR FULLTEXT)

Users wade through electronic-commerce market

June 23, 1997

Word Count: 2181

... the low end is online-store software offered from vendors such as America Online, Viaweb, Virtual Spin, and CommerceWave.

Business -to- business needs are the most demanding, and, accordingly, applications offer capabilities that go well beyond the product catalog, shopping cart, and "hooks" into back-end credit-card payment and fulfillment-systems—found\_in\_popular\_e=commerce\_applications. In particular, they allow organizations to...custom [storefront] templates, create live links and incorporate shopping cart functions, or pass variables to payment processors," Melnyk explains.

PUSHING THE LIMITS. Richard Warren, vice president of information services at Judd...

...company's president. Specifically, the company needed a product that supported CyberCash's secure electronic- payment system.

"It was our bank [Wells Fargo], where we have our merchant [credit-card] account," Betts says, "that led us to CyberCash."

It provides a secure, encrypted, Internet credit-card payment system. When the company first looked at going online with its catalog, it tried to...provide capabilities that tie the front-end buying processes to the back-end accounting and financial systems.

In a typical consumer-to-business transaction, for instance, a

In a typical consumer-to-business transaction, for instance, a single buyer generally pays for goods with a credit card. In the...

...however, the e-commerce application must handle multiple transactions -probably involving multiple buyers -- purchase orders, **invoices**, and
other forms, which may need to be handled electronically, thus requiring
electronic-data-interchange...

# 34/6,K/14 (Item 1 from file: 148)

DIALOG(R) File 148: (c) 2004 The Gale Group. All rts. reserv.

12122967 SUPPLIER NUMBER: 59608140 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Dispelling the myths and exploiting the opportunities. (importance of correctly understanding electronic commerce)

Dec, 1999

WORD COUNT: 4567 LINE COUNT: 00397

... yet to make a profit despite phenomenal turnover.

However, to use this as the typical **business** example is misleading. Non- **virtual** companies, such as Dell, have successfully combined e-commerce opportunities with their existing business, increasing...

- ...1 information sharing; informing and interacting internally and with third parties;
- 2 transacting; purchasing and payment transactions with third parties;
- 3 the service and support proposition; integrating customers and suppliers into...come from the US market.
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Some ventures have unsuccessfully tried to transfer existing business models to the web, for example, by setting up a **virtual** shopping mall. The main reason for their limited success is that the web allows users...

...would direct the customer to the Walt Disney site, rather than to a general retailer.

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The lack of public confidence in electronic **payment** systems is considered as one of the main factors constraining business to consumer e-commerce...

- ...shortening the production cycle.
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An extranet can allow customers to place orders, receive invoices, track shipments and process payments. Boeing, in the USA, launched its on-line spare parts extranet in October 1996; 2...

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The issue of transacting business over the internet is contentious. The main reason for...

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#### ...of investment

The initial costs for the company includes design of the web site and **payment** to the internet Service Provider (ISP). Costs can vary greatly depending on both the level...

34/6,K/15 (Item 2 from file: 148)
DIALOG(R)File 148:(c)2004 The Gale Group. All rts. reserv.

09095954 SUPPLIER NUMBER: 18860872 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Are corporate procurement cards for you? (includes related article on buying and paying trends)

Sep, 1996

WORD COUNT: 6654 LINE COUNT: 00548

... providing P.O. copy to the supplier, filing and internally distributing P.O. copies, resolving **invoice** differences, and closing the order when the transaction is completed.

Accounts Payable - receiving, sorting, matching, filing, and entering data relating to receiver, invoice, and purchase order; routing/re-routing of invoices for approval and account coding, expediting invoices with discounts, managing backorder suspense files, preparing end-of-month accruals, setting up new vendors...

...for sundry items, and reimbursing petty cash; all check-writing activities including check processing, matching invoices to checks, obtaining or imprinting signatures, filing, and mailing.

Production/Other - Completing requisitions and obtaining...

- ...cardholders experience a sense of trust and empowerment;
- \* Supplier goodwill is increased because suppliers collect payment for CPC purchases in fewer than three business days; and
- $\ \ ^{\star}$  CPCs yield other spin-off...and modifications to internal business controls.

For example, most large companies have automated ordering and payment systems in place for high-dollar inventory purchases. Hence, CPCs are neither appropriate to the...all receipts - even if the purchase was made on a CPC - because hard copies of invoices help the revenue agency determine whether the correct sales tax rate was applied to the various line items on the invoice. Level II data include only the total sales tax amount for the transaction and not...made.

Modifications to the present system. Two activities will change for most users: receiving and **invoice** processing. Most companies using CPCs require suppliers to label all documentation resulting from card transactions...

...the-goods-to-the-internal-mail-operation.

Companies also must ask suppliers to stop sending invoices for CPC purchases or at least not to send the usual types of invoices .(18) If this change is not made, accounts payable employees will waste time and effort trying to match the invoices to receiving documents and purchase orders and possibly create a duplicate payment.

LEADING THE WAY

N.R. Stewart recently suggested that, for accountants to maintain viability and...

...full-scale electronic commerce, including Intranet-based internal requisitioning processes and Internet-based acquisition and payment for needed goods. But CPCs are low-risk, low-cost tools that dramatically alter and...

...Schmidt, and J. Jordan-Wagner, "Corporate Purchasing Cards: The Reengineered Future for Non-Inventory and Payment," Journal of Cost Management, Fall 1996.

3 Card distribution policies are affected by certain control...

...in tracking charges for shorted shipments, returns, and allowances.

13 See T. Trautman, "Trends in **Payment** Processing: Using Plastic at Cummins Engine," TMA Journal, July/August 1995, pp. 16-19.

...agreements, association rules, and standards. It is used routinely to transact inventory order-related information.

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Richard J. Palmer, CPA, is the Hardy-Graham professor for the department of accounting...

(Item 3 from file: 148) 34/6,K/16

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SUPPLIER NUMBER: 17336065 (USE FORMAT 7 OR 9 FOR FULL TEXT) Virtual Vineyards Takes the Fear out of Electronic Commerce; Becomes First Internet Retailer to Incorporate Non-Proprietary Payment Technology for World Wide Web.

Sep 5, 1995

WORD COUNT: 791 LINE COUNT: 00082

... Takes the Fear out of Electronic Commerce; Becomes First Internet Retailer to Incorporate Non-Proprietary Payment Technology for World Wide Web.

TEXT:

LOS ALTOS, Calif--( BUSINESS WIRE)--Sept. 5, 1995--Leading the charge among Internet retailers, Virtual Vineyards (http://www.virtualvin.com) today announced that online shoppers using any World Wide Web...

Participating as a beta test site for CyberCash's Secure Internet Payment Service since early April, Virtual Vineyards became the first Internet retailer to accept encrypted credit...

...the electronic gap between the online community and the banking system is critical in establishing Virtual Vineyards as a reliable and credible Internet business, " said co-founder and master sommelier Peter Granoff. "Now that Virtual Vineyards offers the CyberCash service, payments not only secure for each consumer, but clearances for transactions are accomplished automatically. CyberCash reduces the cost and complexity of payment transactions on the Internet, allowing us to build loyalty and trust with our customers."

"Virtual Vineyards recognized the value of complete end-to-end security and automatic authorization when accepting payments on the Internet," said Magdalena Yesil, vice president of marketing, CyberCash. "With cost-effective payment solutions, industry experience and valuable products and service, Virtual Vineyards has set an example of establishing a business successfully online. As its business expands to include gourmet foods in addition to wine, CyberCash will also grow to accept cash and coin payments , as well as credit cards."

Ordering Wine is Easy

Ordering wine from Virtual Vineyards is...

...that is shipped to the recipient with the order.

Customers are offered four methods of payment . They can send in a check or transmit their credit card information via fax, a toll-free phone number or directly over the Internet using CyberCash's Secure Internet Payment Service.

How CyberCash Payment Works

To conduct a secure payment transaction consumers download the free client software by clicking on the CyberCash icon displayed on...

...form once, a user need never fill it out again and can now spontaneously make payments with confidence that all transactions will be secure and

private.

Once customers decide to make a purchase, they are presented with an online **invoice** detailing the purchase information and a statement confirming the total charges. The consumer then clicks...

...reviewing-the-order-summary, the customer clicks "PAY" to send the forms and the encrypted payment information to Virtual Vineyards. Virtual Vineyards then adds identification information and forwards the payment data to the CyberCash server. The CyberCash server then initiates a standard credit card authorization...

... Founded in 1994, CyberCash works with financial institutions to provide safe, convenient and cost-effective payment service for the Internet. CyberCash facilitates the purchase of goods and services on the Internet...

...between consumers, merchants, and their banks as well as between individuals. Consumers can now perform **financial transactions** on the Internet efficiently and with complete confidence. For more information contact Cybercash at 800...

34/6,K/17 (Item 1 from file: 275)

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02069436 SUPPLIER NUMBER: 19414140 (USE FORMAT 7 OR 9 FOR FULL TEXT) Electronic commerce. (Technology Information)

May, 1997

WORD COUNT: 5838 LINE COUNT: 00478

...ABSTRACT: Several companies are using electronic clearing systems from such companies as First Virtual to handle **payments** over the Internet. ... their target audiences and shareholders.

A seemingly endless array of applications is emerging in the **virtual** marketplace, where **business** is conducted on the Internet. These applications include the ability to initiate and consummate transactions... technological underpinnings of the on-line commercial marketplace include four critical segments: certification authority, electronic **payment** products, electronic **payment** vehicles, and electronic **payment** services. Let's concentrate on certification authority.

CERTIFICATION AUTHORITY

Digital certificates authenticate the identity of...Secure Sockets Layer (SSL)

- \* Diffie-Hellman
- \* Kerberos
- \* Identification and Authentication (X509v3)
- \* Privacy, (public key encryption)
- \* Payments (electronic document interchange (EDI), secure electronic transaction (SET)).

The SET protocol was developed jointly by...

...whether on the browser, server, or supporting network sides. The SET protocol addresses only the **payment** phase of the transaction, from the individual, to the merchant, to the acquirer (the merchant...

...standing; and the acquirer has a certificate that verifies that it is, in fact, the **financial** institution that should handle the **transaction**.

SECURE SOCKETS LAYER

The primary-goal of the SSL protocol is to provide privacy and... functionality because the key that A and B share only encrypts messages using conventional cryptography.

PAYMENT CLEARING SYSTEMS

A number of companies are establishing electronic clearing systems in an attempt to overcome the security issues involved in handling **payments** on the Internet. Some of these clearing systems don't pass credit card information over the Internet, although others ensure privacy over the

Internet. Essentially, payment clearing involves a system of secure messages that permit the buyer and seller to communicate, while also permitting payment instructions to be sent via the message/ payment clearer, frequently using existing proprietary networks.

First Virtual (Santa Clara, CA) was formed to facilitate...

...using a buyer feedback mechanism built atop existing protocols.

In a nutshell, First Virtual's payment system is built on top of pre-existing Internet protocols, most notably the SMTP/ RFC...

...protocols are "insecure" (they have no strong means of proving identity), First Virtual designed a payment system that provides much stronger guarantees.competing companics have focused on achieving this goal using...

...Virtual designed a higher level protocol based on e-mail callbacks.

In a typical First Virtual scenario, a buyer and seller meet and decide to transact business in any manner they desire. Although this often occurs when a buyer browses a seller...

...with protocols that do not exist today). Once the buyer and seller decide to do **business**, they submit a transaction to First **Virtual**. That transaction can be submitted via standard e-mail or via a proprietary protocol, called...

...First Virtual designed for real-time exchange of MIME objects.

When First Virtual processes a **financial transaction**, it first looks up the buyer's account identifier in its database and finds the...

...with a simple answer of "yes," "no," or "fraud." To actually initiate a real-world **financial transaction**, the buyer must respond with a "yes." Simple attacks based on Internet sniffing are rendered...

...keys in commerce schemes that use public key cryptography for encryption.

A TOKEN OF YOUR BUSINESS

In First Virtual 's system, the valuable financial tokens that underlie commerce-- notably credit card numbers and bank...

...fully interactive selling and transaction tool, the VirtualTAG allows buyers to shop, buy, arrange for payment through the VirtualPIN, and provide detailed delivery instruction all without leaving the banner. Buyers can...CyberCash (Reston, VA), founded in 1994, is a leading developer of software for secure Internet payments. CyberCash provides software for merchants, banks, and consumers utilizing some of the most secure technology...

...Once a price is negotiated with the merchant, the customer is sent an on-line **invoice** detailing the purchase information and a statement confirming the total charges. The customer then adds...

...PIN where appropriate. This information is encrypted and returned to the merchant with the original **invoice**. The merchant adds identification information and forwards all the information to the CyberCash server. At...

...is run off the Internet file server.

In addition to facilitating debit or credit card payments, CyberCash also provides independent electronic payment services. Users establish accounts directly with CyberCash; accounts are maintained on the basis of an...

...CyberCash accounts remain within the participating banks. CyberCash accounts are suitable particularly for electronic cash <code>payments</code> that are too small to be processed cost effectively as discrete credit card or debit card <code>payments</code>. This service will permit companies to process a large volume of small <code>payments</code>, a phenomenon that is expected to arise from the

projected explosion in entrepreneurial electronic information publishing and commerce from the Fortune 1 billion companies.

The CyberCash Secure Internet Payment Service allows banks to address their merchants' needs for a universal, automated, convenient, and secure on-line payment mechanism. Through agreements with established authorization-processors,—CyberCash—extends—the\_automated\_pointof=sale\_\_\_\_\_\_\_paradigm to on-line transactions, thus leveraging the existing electronic payment infrastructure. Banks and their merchants make only minimal changes to their current operating procedures, and the existing infrastructure of payment acceptance remains intact. This allows banks to quickly integrate secure on-line payments into their service offerings.

MICROSOFT MERCHANT SERVER

Will malls become obsolete now that Microsoft's...

...on the Internet, with the appeal of personalized services and the familiarity of credit card payment. Web users open a Merchant Server site and immediately find themselves in a virtual store...excursion.

The Netscape Merchant System also incorporates a complete order-processing system that includes secure **payment** processing, shipping and sales tax, order delivery, and integration with existing order and fulfillment systems...

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02852059 Supplier Number: 45781882 (USE FORMAT 7 FOR FULLTEXT)

E-SHOPPING: VIRTUAL VINEYARDS TAKES THE FEAR OUT OF ELECTRONIC COMMERCE;

BECOMES FIRST INTERNET RETAILER TO INCORPORATE NON-PROPRIETARY PAYMENT

TECHNOLOGY FOR WORLD WIDE WEB

Sept 11, 1995 Word Count: 818

...TAKES THE FEAR OUT OF ELECTRONIC COMMERCE; BECOMES FIRST INTERNET RETAILER TO INCORPORATE NON-PROPRIETARY PAYMENT TECHNOLOGY FOR WORLD WIDE WEB

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HOW CYBERCASH PAYMENT WORKS To conduct a secure payment

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03815379 SUPPLIER NUMBER: 13807844 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Imaging for libraries and information centers. (includes bibliography)

Nov-Dec, 1992

WORD COUNT: 28671 LINE COUNT: 02361

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- on the processing of documents and aim at automating that processing. Examples include purchase orders, invoices, credit card charges, and insurance policies.
- 2. Storage and retrieval systems. These systems are designed... vendors described in this chapter should realize that most of them focus on workflow or transaction processing systems the type popular in banking and financial markets. Few have ever dealt with a library as a potential client. It may take...of systems for the low-end PS/2, the mid-range AS/400, and Multiple Virtual Storage/Enterprise Systems Architecture (MVS/ESA) mainframe environments. IBM's systems, which have been named ImagePlus, incorporate...upon the traditional file folder environment of offices. In addition, Unisys markets InfoImage IIPS, a payment processing application designed for the financial community.

Unisys offers extensive consulting and training support. It...